



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,561	12/17/2003	Tomoyuki Ohzeki	FS-F03218-01	4508
37398	7590	09/26/2005	EXAMINER	
TAIYO CORPORATION 401 HOLLAND LANE #407 ALEXANDRIA, VA 22314			CHEA, THORL	
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,561

Applicant(s)

OHZEKI ET AL.

Examiner

Thorl Chea

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This second office action is responsive to the communication submitted on July 7, 2005; claims 1-8, 10-20 are pending in this instant application.
2. Applicant's arguments with respect to claims 1-8, 10-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-5, 10, 14-15, 17, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the either Reeves (US Patent No. 4,435,499) or Simpson et al (US Patent No. 6,440,649) in view of Siga et al (US Patent No. 4,332,889).

Reeve discloses a photothermographic material substantially as claimed. See for instance the material in column 25, claim 23 wherein the photothermographic material having at least 70 % of the projected area of the photographic silver halide grain having average diameter within the range about 0.30 to about 0.45 micron, an average thickness within the range of 0.04 to 0.05 microns and aspect ratio within the range of 5:1 to 15:1, an organic silver salt oxidizing agent comprising silver behenate, phenolic reducing agent and binder; the silver iodobromide in column 6, lines 1-22 which contains 40 mole percent iodide and 60 mole percent bromide, and the phthalic acid as toner in column 18, lines 10-15. Simpson et al disclose an X-ray photothermographic material containing silver halide tabular grains including silver iodide and

Art Unit: 1752

silver iodobromide having grains average grain size up to several micrometer depending on their desire used. The preferred size 0.005 to 0.8 microns. See column 10, lines 18-38 and column 11, lines 42-60. Siga disclose in column 6, lines 43-68 disclose the relative amount of the silver iodide with respect to silver bromide to satisfy the sensitivity condition and storage condition. It is disclosed that "from the view point of sensitivity of image forming material, the silver halide is desired to contains, beside silver iodide, at least 2 mole %, based on silver halide component, silver bromide and/or silver chloride, although the silver halide may include only silver iodide, i.e. 100 mole % of silver iodide. Furthermore, from view point of stability of the raw image forming material, it is desired that silver halide component contains, besides silver iodide, silver bromide than silver chloride. Therefore, the most preferred silver halide component consists of silver iodide and silver bromide. In this case, silver iodide and silver bromide may be provided in either a mixture thereof or mixed crystals thereof. The molar ratio of silver iodide to silver bromide may be preferably 30/70 to 98/2, more preferably 50/50 to 95/5."

Reeves or Simpson et al may not exemplify the use of the silver halide having iodide content of 70 mole % to 100 mole % having an average sphere-equivalent diameter in the range of 0.3 micron to 5.0 microns, but suggest the average diameter from 0.30 to 0.45 micron. Moreover, it has been known in Siga et al to select mole ratio between the silver bromide and silver iodide for a desired used such as in view point of sensitivity and stability such as shown above discussion. Therefore, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the silver iodobromide grains having iodide content taught in Siga et al in combination with a known average diameter suggested in Reeves or Simpson et al with a reasonable expectation of achieving a photothermographic material with increased photographic

Art Unit: 1752

speed, increased maximum density and improved developed image tone. The claimed limitation in claim 17, 19-20 is related to the process of forming an image and fails to further limit the composition of the claimed photothermographic material. The development accelerator in claim 14 is within the scope of toning agent or speed-increasing compound taught in Reeves in column 18, lines 8-26.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reeves (US Patent No. 4,435,499) or Simpson et al in view of Siga et al as applied to claims 1, 4-5, 10, 14-15, 17, 19-20 above, and further in view of Tsuzuki et al (US Patent No. 6,093,529). The teaching of Reeves is as shown in the above paragraph. Tsuzuki discloses the use of uv absorber in a photothermographic material to prevent its photographic properties from deteriorating. See column 3, lines 19-35. . It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the uv dye and the silver halide with high iodide content taught in Tsuzuki et al in the material of Reeves or Simpson et al to prevent its photographic properties from deteriorating, and thereby provide a material as claimed.

6. Claims 5-6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reeves (US Patent No. 4,435,499) or Simpson et al in view of Siga et al as applied to claims 1, 4-5, 10, 14-15, 17, 19-20 above, and further in view of Nishimura (US Patent No. 5,965,343).

The teaching of Reeves is as disclosed in the paragraph 2 above. Nishimura discloses silver bromoiodide grains having dislocation lines thereon. See column 8, lines 31-51. The silver halide grains provide a photographic material with high sensitivity and less fluctuations in properties due to mechanical stress. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use silver iodobromide having dislocation thereon to provide

Art Unit: 1752

the photothermographic material taught in Reeves high sensitivity and less fluctuations in properties due to mechanical stress, and thereby provide a material as claimed.

7. Claims 2-3, 7, 16, 17, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reeves (US Patent No. 4,435,499) or Simpson et al in view of Siga et al as applied to claims 1, 4-5, 10, 14-15, 17, 19-20 above, and further in view of Zou et al (US Patent No. 6,576,410).

Zou et al a X-ray photothermographic material wherein both side of a support are provided with imaging layer; the use X-ray intensifying screen to expose the material and a compound having structure within the scope of claim 7. See abstract, compound in columns 28-37, T-1 to T-59; and column 14, compound RS-1 and column 15, RS-1a, RS-1b. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the toner taught and sensitizer to improve the toning property in combination with the coating of the imaging layer on both side of the support to form an X-ray photothermographic material in the use of X-ray intensifying screen, and thereby provide a material as claimed.

8. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reeves (US Patent No. 4,435,499) or Simpson et al in view of Siga et al as applied to claims 1, 4-5, 10, 14-15, 17, 19-20 above, and further in view of Goto et al (US Patent No. 6,787,298). The compound of formula (I) in claim 12 and claim 13 has been known in Goto et al. See compound in columns 27-52, compound I-58, and column 13, lines 1-45. These compound provide a photothermographic material with higher sensitivity. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the compound taught in

Art Unit: 1752

Goto et al to increase the sensitivity of the material of Reeves or Simpson et al , and thereby provide a material as claimed.

Response to Arguments

9. Applicant's arguments filed July 7, 2005 have been fully considered but they are not persuasive because of new ground of rejection above. See the teaching of Siga et al and Simpson et al above which discloses silver halide having iodide content within the scope of the claimed invention. Simpson et al discloses silver halide including silver iodide and the average diameter thereof is up to several micrometers depending on their desired used. The worker of ordinary skill in the art would have adjust the amount of silver iodide accordingly for their desired used such as taught in Siga et al or use silver iodide taught in Simpson et al and the average diameter thereof is up to several micrometer depending on their desired used, and thereby provide a material as claimed.

Conclusion


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

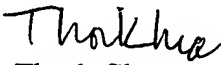
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 1752

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea 
September 16, 2005


Thorl Chea
Primary Examiner
Art Unit 1752